

**Attachment B Mandatory Deliverables**

The following list of deliverables provides a description of each Mandatory Deliverable line item as identified in Attachment A: Technical Specifications.

Items which are listed under Mandatory Add-ons are mandatory deliverable items which the technical specifications indicate must be provided on the contract, but which may be separately orderable from the required base systems.

**Group A (Computer Servers) deliverable items**

Note: pricing shall be inclusive of all necessary cabling, trays, enclosures, racks, cooling, etc. to provide for a fully operational system. The container based system must include all required items listed in 3.2.3. as part of a fully enclosed system.

- 36 node mid-range cluster: 2 Head Nodes; 34 Data Nodes with all necessary cables and racks, etc.
- C++ compiler - mid-range cluster
- Fortran 2008 compiler - mid-range cluster
- Unlimited OS license - - mid-range cluster
- Central license manager- mid-range cluster
- Smart PDU- mid-range cluster
- 36 TB storage- mid-range cluster (quantity 36)
- 500 GB OS Drives - mid-range cluster (quantity 36)
- Management Network GbE switch- mid-range cluster
- KVM switch - mid-range cluster
- Management software utility - mid-range cluster
- Cluster Management software - mid-range cluster
- Storage system / media for 10 PB - mid-range cluster
- HSM software - mid-range cluster
- AutoDesk Maya - mid-range cluster
- RenderMan Studio 4 - mid-range cluster
- RenderMan Pro Server - mid-range cluster
- Oracle database server - mid-range cluster
- 484 node high end cluster - hi end cluster
- C++ compiler - hi end cluster
- Fortran 2008 compiler - hi end cluster
- Unlimited OS license - hi end cluster
- Central license manager - hi end cluster
- Smart PDU - hi end cluster
- Dual 1 TB drives (quantity 4) - hi end cluster
- 36 TB storage (quantity 480) - hi end cluster
- 500 GB OS Drives (quantity 480) - hi end cluster
- Management Network GbE - hi end cluster
- LAN 10 GbE switch - hi end cluster
- Infiniband Network QDR GbE switch - hi end cluster
- KVM capable of supporting 484 nodes - hi end cluster
- Management software utility - hi end cluster
- Cluster Management software - hi end cluster
- Class 3a container system – 32 nodes
- Class 3b container system – 16 nodes
- Class 3a: – upgrade to 256 GB memory
- Class 3a: – upgrade to 1 TB internal storage
- Class 3a: – upgrade to 3.6 PB storage
- Class 3b: – upgrade to 128 GB memory
- Class 3b: – upgrade to 500 GB internal storage
- Class 3b: – upgrade to 1.8 PB storage

**Group B (Mass Storage Devices) deliverable items**

DVD Drive  
Blu-Ray  
DVR  
DAT 72external drive  
STK T9840D external drive  
STK T10000C external drive  
LTO Ultrium external drive  
1 TB hard disk drive  
40 slot / tape drive LTO Ultrium desktop library system  
200 slot / 8 drive LTO Ultrium enterprise library system  
2 PB Large robotic device (64 drives)  
7 TB RAID Blade array  
6 TB Scalable RAID  
HSM Software – 1 PB  
10 TB Virtual Storage (monthly rate)  
Small Office UPS  
Small Server Room UPS  
On-site disk drive destruction  
On-site tape degaussing

**Upgrades**

HSM software expanded from 1 PB to 500PB  
Large robotic device expanded from 64 to 640 drives  
Scalable RAID expanded from 6 TB to 30 TB

**Group C (Server Support and Multi-Functional Devices) deliverable items**

22 inch LCD Monitor  
Portable LCD Projector  
Manual Screen  
Interactive Whiteboard  
Monochrome Laser Printer  
High Speed Monochrome Multifunctional Printer  
Multifunctional Color Printer  
Color Large-Format Plotter  
High Speed/High Performance Scanner  
Large Format Scanner  
Small format tablet  
Large format tablet  
Ergonomic Trackball  
Ergonomic Mouse  
Ergonomic Keyboard  
IP communication module for data input device  
Access Control Motion detector  
All-inclusive Office Video Conferencing  
High volume monochrome MFD  
Medium volume color MFD  
Case of 5,000 sheets - 8x11" White  
Case of 2,500 sheets - 11x17" White  
5,000 Staples  
Toner – supply for medium volume monochrome printer

**Group D (Network Devices, Computer Security Tools and Advanced Video and Conference Tools) deliverable items**

NOTE: within each grouping where OEM 1, OEM 2 are noted, the equipment must be from 2 different OEMs; but the same OEM may have proposed equipment in other groupings. Groupings are separated by '\*\*\*'

Network management software

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Wireless Access Point

Wireless LAN Manager

Wireless Bridge

Coarse WDM (CWDM) Device

Dense WDM (DWDM) Device

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High End LAN switch chassis (OEM 1)

High End LAN switch chassis (OEM 2)

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Medium Network Router (OEM 1)

Medium Network Router (OEM 2)

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Large Network Router (OEM 1)

Large Network Router (OEM 2)

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Low Capacity ATM Switch (OEM 1)

Low Capacity ATM Switch (OEM 2)

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Medium Capacity ATM Switch (OEM 1)

Medium Capacity ATM Switch (OEM 2)

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2- Way Radio (OEM 1)

2- Way Radio (OEM 2)

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IP Telephony System

Portable Hardware based network protocol analyzer

Network Optimization Support for Core Routing & Switching

Cell phone including annual service plan

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Anti-spam appliance (OEM 1)

Anti-spam appliance (OEM 2)

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Anti-spyware software (Windows PC) – enterprise based, 25 clients (OEM 1)

Anti-spyware software (Windows PC) – enterprise based, 25 clients (OEM 2)

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Server level intrusion protection and detection software – 25 servers

Vulnerability assessment software – 2500 seats

Two factor authentication software – 30,000 users

VPN Appliance – unlimited client

Fingerprint based biometric scanning device

Smart card reader

## NNG13451284R

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HD Studio Camera System  
Digital Single Lens Reflex (SLR) Camera with bag  
Conference room double bay multimedia lectern  
Studio lighting - 750 watts of high impact strobe  
High-output supercardioid dynamic vocal microphone  
Surround sound speakers  
Wall mountable 47" Wide LED Display  
42" digital signage monitor  
Document Kiosk  
3D LCD Video Wall  
Tactile glove haptic device  
Medical Exam Station  
Medical grade computer carts  
Cable Tray straight sections  
Ratchet  
Cable Tray Cutter  
Computer Rack Enclosure

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